

**Commonwealth of Kentucky**  
**Division for Air Quality**  
**PERMIT STATEMENT OF BASIS**

Significant Revision, permit No. V-99-026 (Revision 2)  
Westlake PVC Corporation

CALVERT CITY, KENTUCKY 42029

June 6, 2003

RAJESH THOTAKURA, REVIEWER

Plant I.D. # 21-157-00040

Application Log # 55030

**A. SOURCE DESCRIPTION:**

**Revised PVC Production Rate Limits and Emission Limits**

Westlake PVC Corporation, located in Calvert City, Marshall County, Kentucky, has a Title V permit (V-99-026 Revision 1) which was issued in December 2002. Westlake has proposed to revise PVC production limits and emission limits. Permit F-96-023 (Revision 1) authorized an expansion of the PVC plant. Phased operating restrictions on PVC production and residual vinyl chloride concentration were imposed in order to limit the emissions of vinyl chloride and VOC both before and after expansion was complete. The permit also contained phased vinyl chloride emission limits. These phased restrictions and emissions limits are summarized in the Table 1.

The construction of the three stripping columns authorized by permit F-96-023 (Revision 1) is not complete. However, Westlake has determined that vinyl chloride concentration less than the current 105 PPM limit, and PVC production greater than 400,000 tons/ yr. limit, are possible. In order to provide flexibility and take advantage of lower vinyl chloride concentration the plant can achieve, Westlake is proposing the revised permit limits shown in the Table 1. The PVC production limits would increase, while the vinyl chloride concentration limit would decrease. No changes are proposed for the limits that will be effective, after the construction of PVC stripping columns is complete.

The proposal for revised PVC limits will change the dry PVC production to 450,000 tons/ yr and emissions of residual vinyl concentration in resins (12-month average) to 90 PPM. The changing of synthetic minor condition from 400,000 tons/yr and 105 ppm to 450,000 tons/yr and 90 PPM is a significant revision as per 401 KAR 52:020 Section 16. The emissions from proposed revision is 40.5 tons/yr of vinyl chloride, which are less than previous emissions of 41.5 tons/yr.

This revision is also to incorporate back up diesel-powered air compressor for the carrier dryer. The diesel engine is rated at 500-hp output. There are no applicable requirements for this emission unit. The emissions for this are given in Table 2. Based on the emissions, this is listed as an insignificant activity.

**Table 1**  
**Proposed Revised Permit Limits for PVC Production**

| <b>Parameter</b>  | <b>Current Title V Permit Limits</b> | <b>Proposed Revised Limits</b> |
|---|--------------------------------------|--------------------------------|
| <b>Prior to the construction of PVC stripping columns</b> |                                      |                                |
| Dry PVC production (12-month rolling total)               | 400,000 tons/yr                      | 450,000 tons/yr                |
| Residual vinyl chloride concentrations in the resin       | 105 ppm                              | 90 ppm                         |
| Vinyl chloride emissions                                  | 41.5 ton/yr                          | 40.5 tons/yr                   |
| <b>After the construction of new stripping columns</b>    |                                      |                                |
| Dry PVC production (12-month rolling total)               | 750,000 tons/yr                      | No change                      |
| Residual vinyl chloride concentrations in the resin       | 40 ppm                               | No change                      |
| Vinyl chloride emissions                                  | 30.0 tons /yr                        | No change                      |

**Table 2**  
**Backup Diesel-Powered Air Compressor Potential Emissions**

| <b>Pollutant</b> | <b>Lb/Hr</b> | <b>Ton/Yr</b> |
|------------------|--------------|---------------|
| PM/PM10          | 1.10         | 0.28          |
| CO               | 3.34         | 0.84          |
| NO <sub>x</sub>  | 15.5         | 3.88          |
| SO <sub>2</sub>  | 1.03         | 0.26          |
| VOC              | 1.26         | 0.31          |

**COMMENTS:**

**EMISSION AND OPERATING CAPS DESCRIPTION:**

**PERIODIC MONITORING:**

**OPERATIONAL FLEXIBILITY:**

**CREDIBLE EVIDENCE:**

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.